DOCUMENT RESUME

ED 139 183 EC 100 758

AUTHOR Johnson, Eleanor L.
TITLE The Weatherbee Model: A Full-Service Learning Disabilities/Remedial Reading Resource Program for Grades 4-8.
PUB DATE Apr 77
NOTE 50p.; Paper presented at the Annual International Convention, The Council for Exceptional Children (55th, Atlanta, Georgia, April 11-15, 1977)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Delivery Systems; Federal Legislation; Intermediate Grades; Junior High Schools; *Learning Disabilities; *Models; *Program Descriptions; *Remedial Reading; Resource Centers
IDENTIFIERS Resource Room Programs

ABSTRACT

Addressed are theoretical issues involved in implementing a full-service learning disabilities/remedial reading resource program for grades 4 to 8. Topics considered include distinctions between various types of resource rooms, principles of reorganizing school services to provide a full services resource program (including implications for staff responsibility), the middle school program as one part of a service beginning in kindergarten, a language approach to learning problems, the process of transdisciplinary staff reorganization and the role of the administration in this process, and the destructive impact of Public Law 94-142 on this type of program. (CL)

THE WEATHERBEE MODEL:

A FULL-SERVICE LEARNING DISABILITIES/REMEDIAL READING RESOURCE PROGRAM FOR GRADES 4-8

Eleanor L. Johnson
Learning Disabilities Specialist
Weatherbee School
Coordinator of Special Education
M. S. A. D. #22
Hampden, Maine 04444

A paper presented at the 55th Annual International Convention of the Council for Exceptional Children
April 13, 1977
Atlanta, Georgia

Weatherbee School
M. S. A. D. #22
Hampden, Maine 04444

John W. Skehan, Superintendent — Lawrence F. Plaisted, Principal

Basic Statistics

Type of School: Public Middle School, Grades 4-8
School Population: 520
Area: Rural/Suburban

Population Screened:		520	100%
Population tested on basis of screening:		170	34%
Population receiving direct services:		106	21%
Population receiving consultative services only:		11	2%
Population requiring full-time self-contained services (tuitioned):		9	1.7%
	TMR 4		
	Behavior 2		
	Cerebral Palsey 3		

Programs Offered

Direct Services: Language (oral and written, decoding and encoding); Math; Tool Skills (spelling and penmanship). Flexible individualized programs for EMR students and special problems.

Consultation: Services provided to parents and teachers, particularly for students with behavior problems and for making regular class adjustments for all children receiving direct services.

Diagosis: See Appendix III

Special Service Staff

Learning Center:
Joyce Bailey, Remedial Reading Specialist (M. A., University of Maine)
Eleanor L. Johnson, Learning Disabilities Specialist (M. A., Columbia University)
Sally Crate, Assistant Teacher (B. A., certified elementary teacher K-8)
Christine Rudd, Assistant Teacher (B. A., certified elementary teacher, K-8)

Pupil Evaluation Team:
Joyce Bailey, Remedial Reading
Donald Duplessie, Guidance Counselor
Eleanor L. Johnson, Learning Disabilities
Robert Manning, Assistant Principal
Lawrence F. Plaisted, Principal
Gail Tudor, Speech Clinician

INTRODUCTION

The Weatherbee Model is an example of what can be accomplished if you tear down the divisions between traditional staff territories within a school and reorganize service delivery solely on the basis of meeting the educational needs of all children in the most efficient and productive way. The unique features of what was done involved (1) up-ending the normal priorities of scheduling, so that the school is programmed around special services rather than the other way around, and (2) focusing on a language approach to learning problems and using that as the basis of staff reorganization, program planning and curriculum revision.

The groundwork for the project was laid in the 1974-1975 school year, when Joyce Bailey (remedial reading specialist) and Eleanor L. Johnson (learning disabilities specialist) first came to the school. During this year the entire school was screened and evaluated for learning problems, in-service training of the regular staff took place, specialist involvement in revamping areas of the regular curriculum began, and the formal Learning Center program was designed, accepted and financed. The Learning Center program itself became operational in September 1975.

Details of the programs and services offered will be found in Appendix I. The paper itself will focus on certain theoretical issues involved with program implementation, which include: differentiating between various types of resource rooms;

principles on which the school was restructured and an overall view of the program which emerged; the middle school program as one part of a service design which begins in kindergarden; a language approach to learning problems; the elements of transdisciplinary staff reorganization and the role of administration; accomplishments and problem areas; and the destructive impact of P. L. 94-142 on this type of program.

The Model is described as a full-service learning disabilities/remedial reading resource room. It is "full service" because it offers direct remedial services for learning problems due to mild-to-moderate handicaps, consultation to teachers and parents, and diagnostic and program planning services. It is designated as "learning disabilities/remedial reading" because 97% of the children in the program fall into these categories and it is run by specialists in these fields. It is classified as a "resource room" because the students spend less than 50% of their time receiving direct instruction in the 3 rooms comprising the Learning Center. However, it is important to note that there are two types of resource rooms and to understand the difference between them.

The first type of resource room is devoted to mainstreaming children who were previously handled in self-contained classrooms. Because it serves as the vehicle through which children who had been excluded from public school are put back in the regular

classroom, the classroom teacher may view it in a negative fashion: It is feeding into those classrooms problems with which the teacher has not had to cope in the past and for which the teacher may feel inadequately prepared to handle (in terms of training and the amount of time necessary to competently deal with these children's needs). This is the type of resource room that has been discussed most widely in the literature.

The second type of resource room was established as the start of a whole new range of services for children who had previously been in the regular classroom, but who had obvious difficulty in dealing with one or more aspects of the regular curriculum. In this type of situation, the establishment of a resource room program can be seen positively by the classroom teacher as an addition of necessary services which had not been possible before. It is seen as beneficial not only for the students involved, but for the teacher as well: if essential skills are taught to problem learners by the resource room staff, the teacher has more time to devote to the rest of the students. If the resource room staff provides consultant services in terms of handling behavior problems and adapting materials, nerve-wracking behavioral situations become liveable and the teacher is saved enormous amounts of preparation time. This second type of resource room is what is being described by the Weatherbee Model.

The need to present this type of program at a national forum was created by the debates which have arisen over the formulation of the regulations and guidelines for the Education for All Handicapped Children Act, particularly in the attempts to define Learning Disabilities and the implications that flow from the current definition.

The problem was brought into focus last March in the DCLD Newsletter (Vol. 1, No. 3), where the majority of that organization's committee working on the guidelines held that "until such time as the operational criteria have been validated, an incidence of 3% be considered representative of the general school age population with learning disabilities of severe enough magnitude to require direct special education programs." (p. 9) The minority dissenting opinion, however, took the position that by applying this definition, the organization was making "an alteration of the working definition to serve one particular end of the spectrum. This attempt to do justice to the severely handicapped short changes the other 97% of the learning disabled population." (p. 10)

The Weatherbee Model is specifically designed to meet the needs of that 97%. It was seen by our school district to be the logical extention of the general educational philosophy which is aimed at meeting the individual needs of every child in the system. It appears to be working well

from the point of view of children, teachers, specialists, administration and the community.* It is functioning in such a way that those "nearly normal" children are not having to deal continually with being frustrated, and only 1% of the school population is leaving the eighth grade without functional literacy skills (6th grade reading and math skills, 4th grade writing skills). Because of this, many factors which have been pointed out as having a causal relationship with juvenile delinquency and adult anti-social behaviors are being eliminated.

Given that the new federal law does reflect the bias of those who have lobbied and worked for it (i. e., those concerned with the seriously handicapped), there is a need for advocating the rights of those children with moderate-to-mild handicaps, so that the programs which have already begun to function will continue, and that eventually they will become an inherent part of every school.

* A statistical summary of gains made will be found in Appendix V.

OVERVIEW

Principles of Reorganization

The Learning Center at Weatherbee School was created because of a general agreement among the entire staff that the traditional ways of delivering special services (both specialist working independently and fitting special help in around the regular program) were simply not achieving the results that were possible. As we studied the situation, we found that the problems did not center around not having the specialists we needed nor in the competency of the regular teaching staff. The problems we did find translated themselves into the following working principles upon which we restructured the whole school:

1. All children in the school with any degree (no matter how minor) of learning problem should receive services to bring them up to their normal potential for school functioning.

2. Remedial Reading and Learning Disabilities programs are a basic, not extra, part of the curriculum.

    a. Implications for organization of service delivery

        (1) Services should be a part of the regular program and logically coordinated with the regular teaching of skill areas.

        (2) Because of the difficulties involved in providing services on five grade levels involving 13 different schedules, the regular schedule must be programmed around specialist schedules.

b. Implications for staff responsibility

(1) Specialists and their assistants should provide direct instruction in skill areas.

(2) Classroom teachers have definite responsibilities in implementing special programming because: 80-90% of learning problems involve language, which is taught and used throughout the school day; at least 70% of the students' time is spent in the regular classroom; and because certain types of problems must be the primary responsibility of the classroom teacher. Specifically, classroom teachers are seen to be responsible for four areas:

(a) Acting as a major component of the screening and on-going diagnostic process;

(b) Providing primary therapy for attention malfunctions and behavior problems;

(c) Adjusting the requirements of performance in subject areas to account for disabilities;

(d) Reinforcing areas of the remedial program which the child has a chance to practice while doing the work of the regular class.

c. Implications for curriculum areas: the regular program should be re-evaluated in light of meeting the needs of all children.

3. Receiving services should not penalize the children involved.

a. They should not miss a part of the regular program which they consider enjoyable (music, gym, art).

b. They should not miss a part of the regular curriculum which they would have to make up in order to adequately perform in the regular classroom.

c. They should not be conspicuous by leaving the room in the middle of a class activity in order to get help.

d. They should not have to conform to varying performance expectations.

e. They should be able to move into and out of special programming easily.

4. Teachers should not be penalized for students receiving help.

   a. They should not have to remember widely scattered schedules regarding when students have to leave the room.

   b. They should not have to plan their classes around a part of their class being absent at fairly random times of the day.

   c. They should not have to create make-up work or extra teaching sessions to compensate for the child missing important class time.

5. Specialist roles and student programming should be rationalized within the special programs themselves.

   a. Traditional remedial reading and learning disabilities programs, if kept separate, often function with a 70% area of overlapping because they both deal with language problems. By combining programs and making use of the flexibility provided by this overlap in expertise (and coordinating with the speech clinician), remedial programs can be structured more efficiently and a broader range of programs can be offered.

   b. Many of the programs which the specialists had done themselves could be more effectively administered by trained assistants under the supervision of the specialists (specifically the areas of spelling, handwriting and areas of student programming requiring one-to-one drill)

   c. Children should be seen in consistent groups, as it is felt that the advantages offered by making use of group dynamics offset problems caused by seeing children with different problems at the same time.

The result of turning these considerations into a working program involved restructuring the whole school. First, we will look at what emerged as the formal "Learning Center." Then we will look at the changes made in the school as a whole.

The Learning Center: Staffing, Scheduling, Programming

Staff

The Learning Center has a full-time staff of four: remedial reading specialist (M. A.), learning disabilities specialist (M. A.) and two assistant teachers (B. A., certified K-8 regular teachers). Part time use is made of the two school aides, and volunteer high school tutors have been used in specific cases. In addition, the efforts of the Learning Center staff are closely coordinated with those of the district speech clinician and the school guidance counselor in the areas of programming and evaluations, as well as the rest of the regular teaching and administrative staff.

Scheduling

The regular program in grades 4-6 was already organized in teaching skills (reading and math) in departmentalized ability groupings. The Learning Center language programs were scheduled to take place at reading times for each grade level. Learning Center math programs were scheduled to take place during math times. The teaching of tool skills (spelling and handwriting) is coordinated with each homeroom teacher so as to conform to the times when the entire class is working on these skills.

The junior high rescheduling was more difficult because it involved regrouping as well as rescheduling, which required school board approval. A "math group" was created for those children experiencing difficulties in math. All students who required language rmeediation were placed in one group so they could be seen by the specialists one period per day, replacing the regular English class. Due to the ideosyncracies of the school bus schedule, junior high students were available two periods per day when the primary students were not available. By scheduling the junior high during these two periods, it allowed the specialists to see the younger children during the full primary day.

In addition to the scheduling of direct services, the reorganization allowed for the creation of 1½ hour blocks of time for testing, planning and conferencing. Also, making the specialist schedules parallel, rather than opposing, also allowed for team teaching.

Programs

A. Grades 4-6

1. Language Programs (provided by the Remedial Reading and Learning Disabilities specialists)

   a. Reading. Reading programs serve children who are reading more than one year below grade level and are exhibiting specific skill problems and/or pronounced difficulties in comprehension, speed and/or fluency. The methodology encompasses a language experience approach, thereby making extensive use of oral and written language (listening, speaking, writing) as well as tranditional techniques. Enrollment: 60

b. Written Language. This is a more intensive program for children exhibiting severe problems in the production of written language (formulation and syntax). Screening is done on the basis of analyzing work samples produced in the regular classroom and teacher observation. Additional evaluation is made on the basis of taking directed samples of written work via dictation, copying and spontaneous writing. Enrollment: 14

c. Language Tutorial. These are specially designed small group sessions for those children who exhibit a general language malfunction which is evident in listening, speaking, reading and writing patterns. Enrollment: 13

2. Math Programs (provided by the Learning Disabilities specialist, 4-6; Assistant Teachers & regular math teachers, 7-8)

Even though math is taught in ability groups throughout the school, it was found that a small number of children (3%-5%) in each grade required more specialized help than could be given in the "low" math group. Analysis of the types of problems which caused a severe dysfunction in math classes led to noting the presence of one or more of the following factors: ATTENTION problems (the child needs a very small group, high structure, constant monitoring and direct teaching); ROTE MEMORY problems (cannot remember math facts); SEQUENTIAL MEMORY problems (confuses the order to steps in operations that require more than one step, cannot remember where to start, what comes next); CONCEPTUAL problems (this is really a language problem); SPACIAL ORGANIZATION (putting numbers in the correct place, copying, needs working page made very clear visually, has problems with difficult operations needing spacial organization skills -- regrouping, dividing, multiplying, measurement, fractions, decimals, etc.); SPEED problems (works at an extremely slow pace); problems with INCONSISTENT PERFORMANCE (on some days learns well, other days not at all); FRUSTRATION TOLERANCE is extremely low and is expressed in catastrophic reactions to working on anything which isn't already known, mastered and perceived as being easy; SEVERE READING PROBLEM; problem with EXCESSIVE ABSENCES (which make it almost impossible to keep up with any regular program, especially when the absenses are not due to one long illness, but are of the regulary-absent-one-day-a-week variety).

3. Tool Skills.

a. Handwriting. Individualized handwriting programs are provided by an Assistant Teacher under the supervision of the Learning Disabilities specialist to small groups (maximum: 5). The handwriting program is available to all students in the school, whether or not they are involved in other Learning Center programs. Referrals are made on the basis of handwriting sampels and observation of how the child writes. Enrollment: 55

b. Spelling. The remedial spelling programs are administered in two different ways. Children involved in other Learning Center language programs have their spelling instruction provided by the specialists and coordinated with other areas of their reading and written language programs (both in the Learning Center and in the regular classroom). Students who have spelling problems but do not have problems with reading or with formulation and syntax in written language receive small group instruction from an assistant teacher. Diagnosis is made on the basis of performance on the Phonovisual Diagnostic Test and the spelling section of the Wide Range Achievement Test.

In addition to the remedial spelling programs, those students who work slower or have difficulty coping with the exercises in the regular spelling program (but not with the words themselves) are helped by the assistant teacher or within the regular classroom with adapted materials. Enrollment: 75

B. Junior High Programs

At this level programming is highly individualized because the students enrolled are there because they fit into one of two groups: (1) students with "hard core" learning problems who have come through the school system's special programming but are still having significant problems in skill and conceptual areas. By classification, these would be EMR students and

slow learners with specific learning problems, usually accompanied by mild emotional or motivational problems; (2) transfer students who have not had remediation in the past, or whose remediation has been sporatic due to a high degree of family mobility. For the first group of students, the programming centers on mastery of written language skills within a pre-vocational context. For the second group, the programming is much more similar to the 4-6 language programming, focusing on making reading a functional skill.

Skill problems in math are handled by the regular math teacher who is aided by one of the Learning Center's assistant teachers. Individualized programs are designed by the Learning Disabilities specialist for those students whose problems cannot be adequately handled within the context of the remedial math group itself.

C. Additional Services

In addition to these regularly scheduled programs, many other services have been made available due to the presence of the second assistant teacher.

With the exception of time spent in the 7th grade special math group, one assistant has a totally flexible schedule and has been used to deal with changing conditions and needs as they arise.

In the past two years this assistant has been used to: carry out part of the speech program of a newly mainstreamed deaf child who needed intensive work on lipreading and speech (the speech clinician saw the student two days per week and the same program was maintained by the assistant the other three days); carry out a highly structured language tutorial group for students who needed more work in this area than could be provided during the regular language times of the Learning Center program; do all KEY Math Test evaluations; tutor children with a high rate of sporatic absences; run "motivational" projects for remedial students who had given up or gotten turned-off, particularly in the junior high; work with transfer students who had very serious problems and needed extensive one-to-one help with programs designed by the specialists; act as a true "assistant" -- working along with the specialists in the Learning Center. In addition, the assistant has been used to help with difficult situations caused by decreasing enrollments in some grades and consequent economy moves which result in the elimination of a regular teaching position.

Conspicuously absent from this outline are specific programs in perceptual training, memory and modification

of maladaptive behaviors due to distractability or hyperactivity. This is due to two factors: First, these problems are, in most cases, not seen to be separate from, but fundamentally related to the ability to deal with school work in the school environment. As such, training in these areas are incorporated into the programs outlined above and throughout the school day. If a child does exhibit an extremely severe deficit in an area of perception or memory, he will be scheduled for individual help with a specialist. Second, since the school district's special education programs begin in kindergarden, by the time the children reach fourth grade most visual perception problems have been remediated, with some residual b-d confusions still present. The major perceptual difficulties seen in grades 4-6 involve auditory discrimination, and this is generally handled as an intrinsic part of the language program. Generally, having had help in the past, children of this age have problems on the integration/association level, rather than on the perceptual level.

Given the above overview of the program design, a more intensive discussion is now in order that focuses on the language approach which we use and how we mixed the roles of the specialists and classroom teachers throughout the school day (transdisciplinary staff reorganization).

LANGUAGE

Language skills--acquiring them, using them, enhancing them--is not only the focus of specialists dealing with reading, learning disabilities and speech, but really encompass most of what regular education is all about. Besides the areas which are obviously a part of language (listening, speaking, reading and writing), the relationship between language skills, thinking skills and behavior is so close that the lines which have been drawn between them must be disregarded if you really want to deal with learning.

The verbal components of language are reliant on the non-verbal prerequesites to language functioning: the ability to perceive, discriminate, remember, associate, focus attention and organize incoming information at an acceptable rate. Just as there is a set of non-verbal prerequisites to the functioning of verbal language, in the same way there is a heirarchy of the verbal components of language: oral language must be functional before the student can deal with written language; and the student must be receiving and processing information correctly before he can express himself in a meaningful way.*

---

*If we think in terms of appropriate expression, we can take into account many behavior problems which are not associated with attention problems or hyperactivity. In our own school, we have found that children who are seen as having behavior problems but who are also described as being "good kids" have fairly severe receptive language problems. Their lack of ability to deal appropriately with their peers, adults or with school structure is reflecting the fact that they are drawing conclusions from and acting on the basis of incomplete information. In more general terms, a look at Wepman's list of non-speech behaviors associated with traumatically induced aphasia in adults, with brain damage confined to speech centers, shows that of the 34 deviations, only three are not commonly associated with learning disabilities. See Appendix II.

Because of this global approach to language, the Learning Center programs which deal with this area are organized to reflect these operating principles:

(1) Because so many problems which have been identified in written language have their roots firmly implanted in the student's ability to deal with oral language, activities in both realms must be constantly intertwined.

(2) Learning is partly a random process, and the straight-line logic presented in curriculum guides, or skill sequence charts, do not accurately represent how the learning process takes place. Allowing a child to experience a wide range of related activities, some of which may be beyond his general level of functioning, often brings about the learning of "lower" level skills.

(3) Skills and concepts being taught need to be experienced through the maximum number of channels, so that the reinforcement brings about mastery.

(4) Students should be presented with the rules and structures that govern language useage, as one of the reasons they find themselves in remedial programs is that their own sense of organization of certain types of cognitive material is not functioning.

(5) Learning takes place most effectively in an environment which is engaging to the student. This means that at the same time as the environment must be controlled to

provide minimum distractions and maximum structure, the programs themselves must be geared towards active learning: even so-called passive activities like listening and reading must be presented so as to have an active goal attached to it (e. g., following directions in order to play a game), which the child perceives as being worthwhile for his own reasons.

Translating these principles into actual teaching has led to programming which is effective yet defies efforts at simple categorization. A wide range of commercially produced and teacher made materials are used (from Gillingham and Distar III to Houghton-Mifflin Interaction Kits), and observation of classes would show everything from highly structured drill situations to free-flowing group activities which are spun off the tops of our heads, heeding the inspiration of the moment. We will use anything that will get the job done, and as there is an infinitely wide range of language problems to deal with, we use an equally wide range of methods.

TRANSDISCIPLINARY STAFF REORGANIZATION

Role of the Classroom Teacher

In order for the regular teaching staff to fulfill their responsibilities (acting as a major component of the screening and diagnostic process; providing primary therapy for attention malfunctions and behavior problems; adjusting the requirements

of performance to account for disabilities and reinforcing areas of the remedial program which the student has a chance to practice while doing the work of the regular class) the specialists embarked upon a series of steps that were designed to both upgrade the level of knowledge of the classroom teacher about learning disabilities and also to create systems which could take advantage of the vast amount of knowledge the classroom teacher has about specific children.

The specialists provided the regular teaching staff with a one semester in-service course on learning disabilities, backed up by additional sessions on attention malfunctions, auditory problems, oral language problems and disorders of written language (encoding). These additional sessions were held because there was general agreement that these were the areas where the staff had the least knowledge and yet were the most crucial in terms of regular class functioning of the special student. Sensitizing the staff to learning problems and how they manifested themselves was also done by involving them in the administration and scoring of the Slingerland Screening Test.

The knowledge teachers have about the children they teach is often unuseable because it can't be expressed. To aid in this expression process, we threw out the open ended referral form, which was predominantly white space,

and adopted the Vallett Referral Form for Educationally Handicapped Children. This allowed the teachers to organize their knowledge into meaningful categories with the least amount of work. The specialists also spent a great deal of time talking to the teachers about specific children, because the kind of communication that can take place around specific cases (nature of problem, how it relates to what the child can do in class, specific modifications that have to be made in the class to make up for the special needs) leads to a broader understanding which can be utilized throughout the day with many children. In addition, talking about one specific child often leads the teacher to bring up other children with learning problems who would not generally be referred (particularly children who are disinhibited or have only written language problems).

In short, we found that if the Learning Center staff took on the responsibility of directly remediating specific skill deficits, provided in-service training to the staff and coordinated remedial programs with the four areas of classroom teacher responsibility, the teachers could make use of their heightened perceptiveness about learning problems not only as a diagnostic tool but as a way to constantly make on-the-spot adjustments in the regular program so as to meet the needs of every child. Once this has been accomplished, there is little extra work required of the teacher while providing the child with an optimal learning environment throughout the day.

Role of the Specialists (1)

Besides involving the regular teaching staff in special education, the specialists became actively involved with "regular" education.

We found that many problems that were being referred to us had their roots in the way the regular educational program was operating and in the materials being used. Because we felt that many problems could be avoided completely and, if considerations which we apply to the education of remedial or special students would be applied to education as a whole, we would not have to spend a great deal of remedial time "unteaching," both specialists became actively involved with the regular curriculum.

The reading specialist became the chairman of the committee to select new reading books and programs. In so doing, she turned what can be a rather painful exercise into a very exciting learning experience for the staff not only about reading, but about language as a whole, about different approaches to teaching skills, and how to integrate not only the language arts areas of the curriculum, but the language aspects of science and social studies as well.

The Learning Disabilities specialist was the chairman of the math committee to select a new program for the school district. In so doing, there grew a general understanding of what the important components were of teaching math to all children at various points in their development, and materials were selected that provided younger children (K-4) and remedial programs in 4, 5 and 6, a text which is visually

clear and requires minimal reading for instruction in math (thereby being useable by the broadest range of children). There is also now available a well-developed store of additional materials which are used in areas which were seen to need greater experience-related teaching and reinforcement.

The third area of the curriculum which came to our immediate attention was handwriting (that term is used rather than "penmanship" because our goal is to have children write legibly and fluently, not create an art form with the alphabet). The problem was felt keenly from kindergarden through sixth grade, so the Learning Disabilities specialists in the primary and middle schools worked with the entire regular teaching faculty to create a new handwriting program (based on the Johnson Handwriting Program, Educator's Publishing Service, Cambridge, Mass.). By making letter formation consistent, formation of printed letters logical predecessors to the same letters in cursive (so that the flow of movement does not change when one switches styles), settling on a style of capital cursive letters which was simple (no loops to create directionality problems) yet having some character, and unifying the language used (auditory reinforcement) when teaching letter formation, we could make all students fluent writers, with remedial programs being a slower version of the regular program. We started with a remedial handwriting program which (from necessity) was the simplest and least confusing way to write, and turned it into a regular program suitable for all children.

In addition to involving ourselves in the formal areas of the curriculum, we also set about "regularizing" the special programs on a day-to-day basis. During our first year at the school, the reading specialist spent large amounts of time working in the regular classroom with non-remedial as well as remedial students. Slowly the geography was reversed so that everyone began to spend some time in the reading room. In 7th and 8th grades, the reading specialist worked with all the literature classes, and not only succeeded in normalizing the role of the reading specialist and the reading room, but, at the same time, by switching roles with the literature teachers, provided them with training and experience which allowed them to feel competent in working with remedial students. (Most teachers past the 6th grade level have had little or no training in teaching basic skills and are uncomfortable in those situations.) The learning disabilities specialist did similar things in the area of penmanship, spelling and math.

Role of the Specialists (2)

In addition to intertwining the roles of the specialists with the regular teaching staff, the specialists (including the speech clinician and guidance couselor) re-evaluated their own jobs in relation to one another. We found that there was tremendous duplication of effort going on while many areas which needed to be handled were left out simply for lack of time.

All reading problems, whether traditionally handled by the Reading or LD specialist, are now primarily the province of the reading specialist. Because of the overlapping between reading and other language problems, a quarter of the reading time is spent on formal language experience activities (with heavy emphasis on oral language) which is jointly taught by both specialists. The freeing of the LD specialist during the rest of "reading" time, allowed there to be set up a formal language tutorial program which was jointly designed with the speech clinician. (Because of the numbers of children who required help with articulation, the speech clinician had not been able to do the amount of language programming that was necessary. By using her expertise for program planning and the availability of time and personnel within the Learning Center, it was possible to implement a full language program.) In addition, a written language program was implemented as well as a full remedial math program.

The second area of change came about by purposely increasing the overlapping of expertise. We trained each other to give various diagnostic tests that were mutually useful, thereby giving flexibility to the evaluation process. Also, by recognizing that a given problem could be handled by more than one person, we were able to schedule more one-to-one help: receiving services was no longer dependent on the availability of only one specialist. We also trained assistants to administer programs that could be more effectively done by them, leaving us time for children with more involved problems.

Role of Administration

Although specialists usually have wide latitude in what they do within their own programs, they have no power to make major changes which may be necessary in the school as a whole: this is the area of administrative responsibility. Administrative support must include the commitment of the superintendent to quality supportive service programs. This we had. But the most important commitment must come from the principal of the school in which the program is to work, and the support must be active.

In this case, it was through the efforts of the principal that the implementation of the Weatherbee Model was made possible. After convincing him that we knew what we were doing and had a well thought-out plan, he both led and supported the fight for approval from above (the superintendent and the school board) and for making the changes that were necessary within the school: rescheduling the school around us, making in-service training mandatory for the regular teaching staff, giving us the time we needed for testing, making the teachers a part of the screening and diagnostic team, and making sure we got every piece of equipment and all the materials we requested. The role might best be described as a combination of Sir Lancelot-cheerleader-supersalesman combined with a high level of administrative and educational expertise. Besides the direct involvement, his enthusiasm for the idea and for the program itself proved to be contageous amoung the staff: to a great degree, he is responsible for the success of the program.

REGULAR/SPECIAL EDUCATION K-8

One overall perception that has emerged from providing this type of total-school programming, is that (even with exceptions being made for individual students with unique problems) the general remedial programming from K-8 has a predictable form. As our program is an extention of the one in the K-3 school, it may be useful to look at what transpires during those nine years in both the regular and special programs.

K-4 (Primary): At this level we have found that specialists will be seeing about 32% of the general population. Many problems at this age are difficult to classify, as the same symptoms might be indicative of a developmental lag or specific learning disability, so problems are dealt with noncategorically. Just as the regular curriculum is centered on the acquisition of basic skills, special programming aims at securing for each child the needed skills without incurring undue frustration or the necessity of unlearning. At this age the children love to be worked with 1:1 or in small groups and seek out special attention. Because of the wide range of developmental levels, the specialists often work right in the classrooms along side the regular teachers, giving help where it is needed, making modifications in the classroom environment or program when necessary. It is an age group where attention spans may be short, but at the same time there is a great tolerance for repetitive activities: many of the remedial techniques which

involve drill can be handled easily by the child. It is also an age where children seek structure, so again, remedial programs and modifications coincide with developmental needs.

4-6 (Intermediate): At this level about 23% of the students are receiving some kind of help. Fourth grade remedial programming is the end of the primary program, but also the start of a whole new level of functioning. Due to the change in schools, the spurt in development noted by Gesell (which makes the remedial student begin to stick out in comparison to the rest of his classmates), at this point the special child starts seeking separation for instruction in skill areas. Modifications in the regular program and small group instruction are still needed, but this is due primarily to problems with language development or non-verbal learning disabilities, rather than skill levels. Many children who exhibited problems through third grade have mastered the necessary skills and no longer need special help. Other children who have had no skill problems but who have more complex general language and conceptual problems are beginning to be referred.

In fourth grade the problems encountered in the area of math have much to do with organization and memory, both rote and sequential. Progress at this age in specific skills may be small, the large gains coming in the areas of behavior, attention and raising the tolerance level for frustration. Often a half-year testable gain in math skills is merely a reflection that it took half a year to bring the child's attention span

from 3 minutes to 30 minutes and to get him to the point where, if he perceived he would have trouble with a problem, he wouldn't quit for the day. In fact, the half-year gain shows that when all other factors are brought under control, the child does learn at a normal rate.

In fifth grade the activity level goes down dramatically and there is a real differentiation made between those children with hard-core learning problems (a group made up of children with normal intelligence with very serious perceptual problems, and slow-learners who also have some learning disabilities) and those who we can safely predict will not need special services after 6th grade. Focus here is shifting more and more towards thinking and study skills and language programming in formulation and syntax. In math we see the ability to start to deal with areas that reflect problems in spacial relationships and organization. It is possible to teach multi-step operations.

In sixth grade the numbers of children remain about the same, but there is a split in the rationale of why the children are receiving services. For more than half the group, the year is spent consolidating gains already made and transitioning them into using the cognitive, thinking and study skills that they will need to perform adequately in the regular seventh grade program. It is a year when hyperactivity and distractiability almost cease to be a problem. Large gains are made during this year.

Junior High: The 7th and 8th grade programs focus on hard-core learning problems (3%-5% of the population) and really encompass a totally separate program from that which was described for grades 4-6. This is partly due to the differing needs of junior high students and partly on the fundamental changes that take place in regular education at the 7th grade level, especially when reinforced by using a totally departmentalized program.

Although throughout the intermediate grades there has been a gradual shift in focus from skill acquisition to developing conceptual skills and learning in the content areas, by and large the intermediate teacher is still teaching children, not subjects. A great deal of time is spent in meeting the children on their own developmental level and adjusting curriculum accordingly. Because of this focus and the flexibility the intermediate teacher has in implementing the curriculum, it is fairly easy to coordinate regular and special programs.

With the advent of junior high, the whole focus changes. At this level, teachers have been prepared to teach subjects, not students. Rather than 25 students with whom the teacher can become very well acquainted and for whom many areas of the curriculum can be interrelated throughout the day, the teacher teaches 120-150 pupils per day and is forced, by the limits imposed by numbers and lack of time, into a much more inflexible teaching style. At the same time, the primary responsibility for learning shifts from the teacher to the

student: in sixth grade, if a group of students didn't pass a test, it is generally felt to be because the teacher did not teach it in a way that was appropriate to the students' learning style; in 7th grade, it is generally blamed on the students' lack of studying or inattention.

Because academic evaluation of pupils is made to a large extent on the basis of papers and written tests, students with written language problems begin to feel enormous amounts of frustration. The small numbers of students who have had special help in the past and still require that programming find themselves caught in a bind: they know they cannot cope with the regular curriculum, yet they do not want to be singled out and designated as different. Problems related to junior high programming will be discussed more fully in the conclusion.

CONCLUSIONS AND SOME FINAL THOUGHTS

Before the advent of the Learning Center, services could be best described as a remedial reading program with the learning disabilities specialist providing a back up for specific problems (mainly language) on a one-to-one and small group basis. Only three children were seen for help in math, and this was in addition to regular math classes.

With the reorganization, enrollment in programs went from 63 to 106. A full special math curriculum was installed 4-6, serving 15 children. In junior high, the special math group was created where no remedial math

programs had been available before. Comprehensive spelling and penmanship programs were added for 70 children (this program is expected to decrease in size as the new handwriting curriculum becomes effective) who did not need other Learning Center services and would normally have not received help. We felt that this group of students was extremely important to deal with because, as one progresses in school, the ability to use written language as an automatic tool becomes more and more important. The reorganization provided more testing and joint planning time as well as time slots for working individually with children with more severe problems. In terms of time, in this type of organization, we could provide anything from 20 minutes per week for work on minor problems, to 2½ hours per day for more involved problems, without any disruption of the regular program.

Our hunch was correct about focusing on oral language activities for up to 25% of what had been reading time. Test results show gains in reading averaging +0.9 years/year. Spelling programs showed gains of +0.7 years/year. Math scores improved 1.1 years/year. Handwriting programs in the Learning Center and the general revision of handwriting in K-6 is showing results that can easily be seen in fluency and legibility and the children no longer protesting at having writing assignments. Children involved in intensive language programs are more actively participating in class discussions and feel surer of their ability to communicate throughout the school day. Children can receive a great deal of help without feeling that they are missing anything going on the

regular program or feeling stigmatized. Teachers now look upon the services we can give as a help rather than a burden.

There are still problems to work out which involve scheduling, finding time for the non-teaching side of the specialists jobs and with providing services in the junior high.

The Learning Disabilities specialist found that there was no way to be available for the full time in both language and math programs. The first year, we opted for emphasizing language. This year, internal adjustments were made in the language programs and full time was given to the math program. Next year we are planning a slightly different scheduling arrangement which hopefully will take care of these conflicts.

Both specialists still have problems in finding enough time during the school day for consultation with teachers, with other specialists, and for observing children during class time, but those areas will continue to be a problem so long as we are primarily concerned with giving direct rather than consultative services. This is really a function of what occurs when you make the special programs not special, i. e., they really function as part of the regular program. Since the regular program runs the full span of the school year, so must Learning Center programs. Because the students aren't "taken out" of anything to get services, they can't be "sent back." This means that the traditional beginning and end of school periods which used to be set aside for testing, report-writing, record keeping, making in-class observations and initial modifications in regular programs are no longer there,

and these duties must be performed whenever you can fit them or after school hours. Likewise, it is difficult to supervise a behavior modification program being carried out by the classroom teacher if you are not free to observe at critical times of the day. We have been able to adjust in this area by using the principal and guidance counselor as observers.

Junior high (and secondary programs in general) presents a set of problems for which it is nearly impossible to find easy solutions. We have already noted the problems of stigmatization. Frustration is also increased at this level because the hard-core problem students are levelling off at about the 4th-5th grade level and the gap between their functioning and those of their classmates is getting wider. We have an additional problem at our school because space limitations have meant that there is no shop or home economics program (they are available at the high school), limiting programming to academics with some music and art. There is an increased need for special programming for these students--in terms of pre-vocational training, minimizing frustration and dealing with the emergence of adolescent emotional problems which often lead to disciplinary involvement with administration--at a time when the regular program is least flexible and the Learning Center programs are limited to 1½ hours per day, rather than the 2½ hours possible for younger students.

The final problem area is one which we have begun to deal with under Maine's comprehensive special education law and with which we will have to deal on a larger scale with implementation of P. L. 94-142. Under the banner of good intentions, it may succeed in wiping out the kind of program that has just been described by burying it under a mountain of paperwork and procedural requirements.

The procedural requirements were written and are perfectly workable for the small number of severely handicapped children. They become literally impossible when you are dealing with a resource room program for milder handicaps. The situation becomes particularly confused in a school district such as ours, where it is difficult to draw the line between where regular education ends and special education begins. Also, under our system, the specialists who deliver direct services also service as the diagnosticians and program planners. We have found that in order to adequately evaluate a child with mild learning disabilities, put the results of that evaluation and the broad outlines of the recommended program down in the records in "professional shorthand," and make informal contact with the parents, it takes about 3 hours of non-teaching time per child. If the letter of the law is to be complied with, the 3 hours becomes 12, in order to put the same information in layman's terms, put it on paper, and have the required formal meetings. If the specialist were working in a self-contained class with 8 children, that would be a total of 96 hours of non-teaching work. As specialists

traditionally have spent a week at each end of the school year in this type of activity, this is not unreasonable. However, if the specialist is running a resource room, teaches 35 children directly and deals with another 15 on a consultant basis, this translates into 600 hours of non-teaching work. As there are only 850 teaching hours in a school year, compliance with the letter of the law would mean that three-fourths of teaching time would be spent tending to record keeping, evaluation and conferencing, and a quarter of the time devoted to giving services directly to children. For those school districts which already have comprehensive quality programs, this would mean that they would have to quadruple the size of their staffs in order to give the same amount and quality of service. It just doesn't make sense.

In the same way, the requirements for parent involvement and notification of legal rights become absurd when you are dealing with mild handicaps. For example, let's say that a child has difficulties in the area of visual-auditory association for symbols, with mild visual-sequential memory problems, complicated by a fine motor coordination disfunction. What should the school do? Send written notification to the parents that a formal meeting of the Pupil Evaluation Team will take place; include with that letter two pages of fine print which specifies their legal rights, including their right to an attorney; sit them down in front of seven or eight "professionals," orally explain their rights and fully explain the diagnosis, the methods of assessment and proposed programming?

OR, do you phone the parents, tell them Johnny is having some trouble with spelling and handwriting, you'd like to give him some help, and ask if it's O. K. with them? If there is good informal communication going on between parents and the school, then it seems reasonable that the full extent of formal procedures takes place only when a child is being formally labelled as handicapped and receiving an amount of special education instruction that would actually pull him out of the mainstream of regular education (more than 30% of instructional time).

We have found that there is a natural cohesion between the general educational philosophy of meeting individual needs and the provision of special services for children with mild-to-moderate handicaps who are truely able to function in the regular classroom for most of the school day. We have also found a natural blending of professional areas between learning disability specialists, remedial reading specialists, speech clinicians (in regard to language therapy) and guidance counselors and administrators (in the area of behavior problems). It would be a shame to see this cooperation and teamwork ended because of legal preoccupation with protecting the rights of children at one end of the spectrum of special needs.

A final thought: When one of the staff was reading a draft of this paper, the comment made was, "Don't forget to tell them that we have a lot of fun." In a way, that really

sums up the basis on which our program is built. We do have a lot of fun: we enjoy what we do, we enjoy each other, we enjoy the kids and the kids enjoy what they're doing. It's easy to be successful in a situation like that.

APPENDIX I

PROGRAMS AND MATERIALS

Language Programs

The total language program incorporates the intertwining of the four modes of listening, speaking, reading and writing. Although we combine and make use of a large number of different materials and methods, the theoretical basis rests on Anna Gillingham and Johnson & Myklebust.

Using all four modes, the children explore: description; summarizing, categorizing, sequencing; conceptualizing; question formulation; vocabulary; and forms used in written language (words, sentences, paragraphs, stories, poems/riddles, letters filling out forms). Some of the types of activities which are used include: songs, choral reading, plays, games, newspapers (interviewing, writing headlines, editorials and reports (fact/opinion); proofreading , dictation, using catalogues and phone books, acting out (feelings, ideas, role playing, etc.), discussion (sticking to a topic), giving and following directions, etc.

The reading programs themselves are individualized and center on mastery of word-attack skills, developing comprehension skills and enjoyment of reading. Linguistic, phonic, visual and basal programs are available depending on how the child best learns. A multitude of skill reinforcement materials have been organized on the basis of the skills themselves, so programs can be tailored to the specific needs of each student. Spelling programs are coordinated with the reading program, reinforcing skills through all possible modes.

Materials

Language:
- Houghton-Mifflin: Interaction Kit
- SRA: Distar Language Programs II & III
- Continental Press: Language Step-by-Step, Kits A & B
  Language Patterns and Useage
- Bell & Howell: Universal English
  Critical Incident Masters
- Economy: Keys to Good Language

Reading:
- Prentice-Hall: Phoenix Readers
- Scholastic: Action Books
  Double Action Library
  Sprint Library
  Chillers & Thrillers
  Word Power
- Webster-McGraw: New Practice Readers
- Harper-Row: Basal Reading Program
- SRA: Reading Program (Linguistic)
  Cracking the Code
  Multiread
  BRS Satellites
- Ball-Stick-Bird
- Xerox: Score
- Merrill: Linguistic Readers

Listening/reading/writing: SRA Listening Lab
Merrill Readers
Reading Progress Labs

Skills and Labs: Readers Digest: Skill Builders Workshop
SRA: Reading for Understanding
Barnell-Loft: Specific Skills Series
MacMillan: Spectrum of Skills
Prentice-Hall: Be A Better Reader
Continental Press: Reading/Thinking Skills
Xerox: Table and Graph Skills
Map Skills
Phonics Workbooks: Conquests in Reading
Dr. Spello

Current and Topical Scholastic: Sprint Magazine
Xerox: Know Your World
You and Your World

Equipment and Special Programs: Controlled Reader
Language Master
Cassette Players and Recorders
DuKane
Typewriters (primary electric)

There is also a 300 volume pleasure reading library as well as many games and puzzles to reinforce phonic, word-analysis and spelling skills.

Spelling: Phonovisual Spelling Program
Educators Publishers: Child's Spelling Program
Ann Arbor: Michigan Spelling Program
Educators Publishers: Type It, A Linguistic Typing Program
Adapted practice exercises for Kottmeyer spelling program.

Handwriting: Educators Publishers: Beginning Connected Cursive
Johnson Handwriting Program
A Writing Manual for Teaching the Left-Handed
Frostig letter formation sequence (cursive)
Academic Therapy Press: Building Handwriting Skills in Dyslexic Children

Visual Perception: DLM Materials
Ann Arbor Press: Cursive Tracking
Frostig Program: Visual discrimination and MGL

Teacher Resources (Major): Encyclopedia Britannica: Language Experiences in Early Childhood
Johnson & Myklebust: Learning Disabilities, Educational Principles and Practices
Gillingham: Remedial Training for Children with Specific Disability in Reading, Spelling and Penmanship
Sperry: A Language Approach to Learning Disabilities
Christ Church Child Center: Target on Language
Slingerland: A Multi-Sensory Approach to Language Arts for Specific Language Disability Children

Vallett: The Remediation of Learning Disabilities
Educators Publishing Service: Spellbound
Teachers Word Lists
Solving Language Difficulties: Remedial Routines.
Spelling Workbooks (Plunkett)

Mathematics Programs

The math programs are structured on the intertwining of using a clear text (MacMillan: Series M), supplemental dittoed work sheets (Continental Press Arithmetic Step-by-Step Kit B; Heath, Basic Arithmetic Skills; supplemental masters from Heath and MacMillan; and teacher made materials) and computation skills and basic concept mastery via games. Unifix manipulatives are available for concept explanation but at this age, one of the goals of the program is to wean the students away from concrete materials and get them to trust their own memories.

The text is utilized because this particular series is quite useable with remedial students and, since everyone else in school uses a math book, the students feel better having one too. Supplemental computation sheets are used to provide reinforcement in skills, improve speed and give a sense of accomplishment (since individual sheets and unit packets can be completed in a short amount of time and don't require copying). About half the time is spent in game-type activities which are always run by the teacher. The games are generally teacher made and are played on universal game boards, usually with various types of dice and direction cards. Rules are modified continually to work on specific problem areas.

Practical math and problem solving is also emphasized. In addition to using these skills throughout the program, one month is spent at the end of the year focusing on these areas while using calculators.

We have not yet found a child who was not capable of learning the 4 basic operations, and the fundamentals of fractions, decimals and %. For this reason we do not start compensating for problems involving computational speed and accuracy (via calculator use) until the secondary level. We do, however, formally teach the use of calculators, since they can create as many problems as they solve.

Materials

Continental Press: Arithmetic Step-by-Step, Kits A & B
Heath: Basic Arithmetic Skills
Webster-McGraw Hill: Programmed Fractions
Programmed Decimals
Learning Skills Series: Arithmetic
Harcourt Brace, Jovanovich: Measure Metric
Sequential Mathematics
W. H. Sadlier: Sadlier Mathematics Program
Mastering Mathematics
Improving Computation Skills
Drill for Skill
Problem Solving
Scott Resources: Fraction Bars

MacMillan: Series M, Levels 3-6
Educational Insights (tapes): Let's Learn to Add
Let's Learn to Subtract
Let's Learn to Multiply
Let's Learn to Divide
Let's Take a Test
SRA: Facts Pacer
Arithmetic Facts Kit
Math Applications Kit
Unifix manipulative materials
DLM: Moving Up In Time
Ann Arbor: Michigan Arithmetic Program
Opportunities for Learning: Happy Math
Mathways
Fearon: Money Makes Sense
Using Dollars and Sense
Working Makes Sense
Arithmetic That We Need

Teacher resources include teacher editions from the major math programs and miscellaneous workbooks and materials organized according to skills.

APPENDIX II

Wepman's List of Non-Speech Behaviors Associated with Adult Aphasia

1. Loss of attention and concentration
2. Loss of memory
3. Reduced association of ideas
4. Abstract-concrete imbalance (loss of ability to abstract; concrete concept formation)
5. Poor organizing ability
6. Poor judgement
7. Perseveration
8. Constriction of thought and interest
9. Reduced ability to generalize, categorize, group or plan future action
10. Reduced general level of intelligence
11. Reduced ability to inhibit internal emotional forces which disturb the action of the intellect
12. Inability to shift
13. Psychomotor retardation
14. Feelings of inadequacy
15. Egocentricity
16. Euphoria
17. Increased irritability and fatigability
18. Social withdrawal and seclusiveness
19. Reduced ability to adjust to new situations
20. Catastrophic reactions
21. Reduced initiative
22. Disinterest in the environment, both physical and human
23. Externalization of behavior; a lack of introspection or self-criticism
24. Reduced spontaneity
25. Perplexity (a distrust of one's own ability)
26. Automatic verbalization
27. Impulsive behavior
28. Regressive, infantile behavior
29. Impotence (inability to correct behavior one knows is wrong)
*30. Post traumatic psychotic behavior showing illusions, hallucination, delusions, and extravagant behavior
31. Anxiety and tensions
*32. Convulsive seizures
33. Changing personality profile, the emergence and submergence of characteristics
*34. Hemiplegia

*Behaviors not commonly associated with learning disabilities.

From Aphasia Theory and Therapy by Hildred Schuell (1974), University Park Press.

APPENDIX III

Diagnostic Services and Tests

Because the school is located near a regional mental health center, a major medical center and a state university, non-educational evaluations (neurological, psychological, psychiatric, developmental, physical) are made by outside agencies on the basis of district Pupil Evaluation Team referrals. Screening and educational evaluations made by the district staff include the administration of the following testing instruments:

Vision

- Titmus Eye Test
- Titmus Eye Muscle Test

Speech and Hearing (Oral Communication)

- Templin Darley Screening Test of Articulation
- Goldman Fristoe Test of Articulation
- Pure Tone Screening Test of Hearing Acuit
- Pure Tone Threshold Test of Hearing
- Oral Peripheral Examination
- Wepman Test of Auditory Discrimination
- Goldman Fristoe Woodcock Test of Auditory Discrimination
- Goldman Fristoe Woodcock Auditory Selective Attention Test
- Goldman Fristoe Woodcock Auditory Memory Tests
- Goldman Fristoe Woodcock Sound Symbols Test
- Peabody Picture Vocabulary Test
- Northwestern Syntax Screening Test
- Carrow's Test for Auditory Comprehension of Language
- Carrow's Elicited Language Inventory
- Developmental Sentence Analysis (Laura Lee)
- Wiig-Semel Test of Linguistic Concepts

Learning Abilities

- WPPSI
- WISC
- WISC-R
- Stanford-Binet
- Illinois Test of Psycholinguistic Abilities
- Detroit Tests of Learning Abilities
- Bender-Gestalt
- Slingerland Screening Test
- Frostig Developmental Test of Visual-Motor Integration
- Purdue-Kephart Perceptual Motor Survey
- Harris Test of Laterality
- Psychoeducational Inventory of Basic Learning Abilities (Vallett)
- Basic Concepts Inventory (Engelmann)
- Slossen Intelligence Test
- Vineland Scale of Social Maturity
- Tests of Basic Experience
- Kindergarden Screening Test (district, based on Gesell)
- Reading Readiness Test (district)
- Lorge-Thorndike
- California Test of Mental Maturity
- Differential Aptitude Test

Academic Diagnostic-Prescriptive Tests

KEY Math Test
Diagnostic Reading Scale (California)
Mann-Suiter Inventories
Phonovisual Spelling Test
Wide Range Achievement Test
Peabody Individual Achievement Test
Metropolitan Achievement Tests

APPENDIX IV

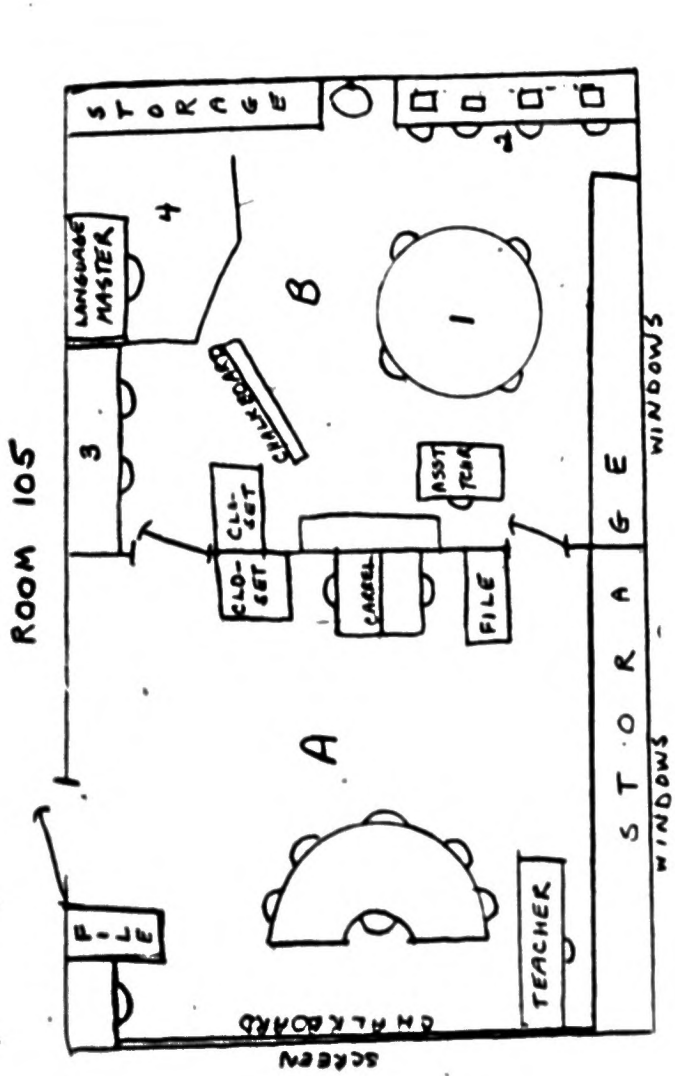
PHYSICAL PLAN OF THE LEARNING CENTER

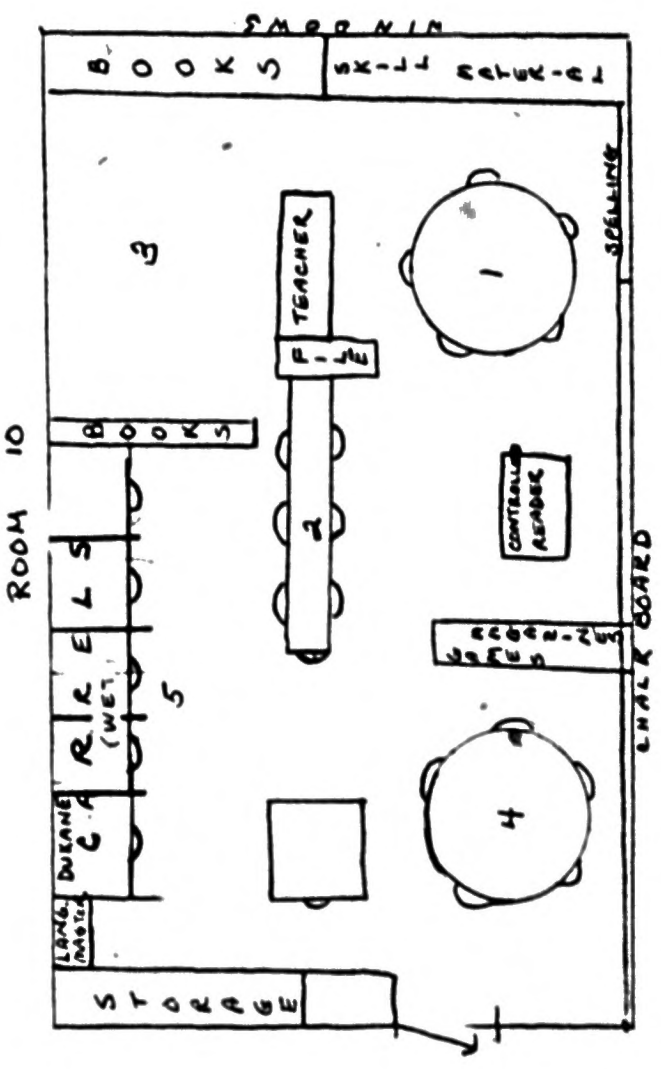
Rooms 10 and 105 comprise the main areas of the Learning Center. In addition, there is a small room where spelling and handwriting programs take place.

Room 10 is divided into five areas: (1) skills instruction, (2) group instruction, (3) pleasure reading, (4) game area and (5) individual study and work carrels where the tape recorders, individual film strip viewers, Dukane and Language Master are located.

Room 105 is divided by a center wall into two instructional areas. Section A is the main area for group work, with privacy places available for distractable children. Section B has a group instruction area (1), as well as a typing area (2), a one-to-one instruction area (3) and a soundproofed area protected by a screen where the Language Master is located (4).

All rooms are carpeted and have acoustical ceilings.





THE WEATHERBEE MODEL
STATISTICAL SUMMARY: 1975-1976

Statistics have been drawn up for the first year of full Learning Center operation, using Metropolitan Achievement Tests for language skills and KEY Math Test scores for math skills. It is our experience that individualized testing for mathematics is a more valid indicator, since many of the contributing factors to math disabilities (especially the inability to work under pressure, distractability and slow work speed) make standardized testing situations an invalid measure of actual functioning.

Grade		Word Knowledge	Comprehension	Total Reading	Language	Spelling	Math Computation	Math Problem Solving
4	Range	-0.8 to +1.1	-0.2 to +1.7	-0.2 to+1.4	+0.6 to +2.0	-0.6 to +2.1	+0.4 to +1.3	-0.3 to +1.3
	Mean	+0.4	+1.0	+0.8	+1.0	+1.1	+1.1	+0.02
	Median	+0.7	+1.2	+0.8	+1.1	+1.1	+1.2	+0.5
5	Range	-0.9 to +6.2	-0.4 to +1.9	-0.7 to +2.7	-0.3 to +2.0	-0.2 to +1.3	+0.9 to +2.5	+0.7 to +2.7
	Mean	+1.2	+0.7	+1.0	+0.7	+0.2	+1.1	+2.2
	Median	+0.4	+0.7	+1.2	+0.8	+0.3	+1.2	+2.3
6	Range	-1.4 to +1.4	-1.5 to +3.6	-1.4 to +2.2	-0.7 to +3.9	+0.6 to +3.4	+1.0 to +1.5	-1.0 to +2.5
	Mean	+0.1	+1.3	+1.1	+1.1	+1.1	+1.1	+1.0
	Median	+0.6	+1.5	+1.4	+1.4	+1.7	+1.1	+0.9
7	Range	-0.3 to +2.1	-1.9 to +3.4	-0.7 to +2.1	-0.3 to +1.6	-0.6 to +3.5		
	Mean	+0.9	+1.1	+0.8	+0.8	+0.5		
	Median	+1.0	+1.3	+1.0	+0.9	-0.3		
8*								

Numbers indicate amount of gain or loss in years/year.

*Since the Metropolitan Achievement Tests are not given in 9th grade, comparable measures of gains and losses for the 8th grade program was unavailable. Individualized testing with the California Diagnostic Reading Scale showed a range of gain in word knowledge from 0.0 to +1.0. The mean gain was +0.5. Comprehension gains ranged from 0.0 to +2.0, the mean gain being +0.6.